

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A vehicle master clutch engagement method, comprising the steps of:

determining a dynamic throttle operating parameter value; and

setting an operating mode of the clutch based on the dynamic throttle operating parameter value.

2. (Currently Amended) The method of claim 1 wherein the dynamic throttle operating parameter value corresponds to ~~one of~~ throttle application rate ~~and acceleration of throttle application~~.

3. (Currently Amended) ~~The method of claim 1~~ A vehicle master clutch engagement method, comprising the steps of:

determining a throttle operating parameter value; and

setting an operating mode of the clutch based on the throttle operating parameter value, wherein the step of setting the operating mode is further defined by engaging clutch at an increasingly aggressive rate when the throttle operating parameter value is increasing.

4. (Previously Presented) The method of claim 1, further including the steps of determining at least one vehicle operating condition, comparing the vehicle operating condition to a predetermined limit, and setting the operating mode of the clutch based on the comparison step.

5. (Previously Presented) A vehicle master clutch engagement method, comprising the steps of:

determining a throttle operating parameter value;

comparing the throttle operating parameter value to a first threshold value; and

setting an operating mode of the clutch based on the comparison step at a first rate when the throttle operating parameter value is less than the first threshold value; and at a second rate more aggressive than the first rate when the throttle operating parameter value is greater than the first threshold value.

6. (Currently Amended) The method of claim 5, wherein the throttle operating parameter value corresponds to ~~one of throttle position, throttle application rate and acceleration of throttle application.~~

7. (Previously Presented) The method of claim 5 wherein the operating mode further comprises engaging the clutch at the first rate when the throttle operating parameter value is substantially equal to the first threshold value.

8. (Cancelled)

9. (Previously Presented) The method of claim 5, wherein the operating mode comprises engaging the clutch at the first rate when no throttle operating parameter value is determined.

10. (Currently Amended) A control system for engaging a vehicular master clutch that comprises an electronic control unit for receiving signals corresponding to a dynamic throttle operating parameter value, the electronic control unit setting an operating mode of the clutch based on the dynamic throttle operating parameter value.

11. (Currently Amended) The system of claim 10, wherein the dynamic throttle operating parameter value corresponds to ~~one of throttle application rate and acceleration of throttle application.~~

12. (Currently Amended) ~~The system of claim 10~~ A control system for engaging a vehicular master clutch that comprises an electronic control unit for receiving signals corresponding to a throttle operating parameter value, the electronic control unit setting an operating mode of the clutch based on the throttle operating parameter value, wherein the operating mode comprises

engaging the clutch at an increasingly aggressive rate when the throttle operating parameter value is increasing.

13. (Previously Presented) The system of claim 10, wherein the electronic control unit receives signals corresponding to a vehicle operating condition, compares the vehicle operating condition to a predetermined limit, and sets the operating mode of the clutch based at least in part on the comparison.

14. (Cancelled)

15. (Currently Amended) The system of claim 24, wherein the throttle operating parameter value corresponds to ~~one of throttle position, throttle application rate, and acceleration of throttle application.~~

16. (Previously Presented) The system of claim 24, wherein the operating mode comprises engaging the clutch at the first rate when the throttle operating parameter value is substantially equal to a first threshold value.

17. (Cancelled)

18. (Previously Presented) The system of claim 24, wherein the operating mode comprises engaging the clutch at the first rate when no throttle operating parameter value is determined.

19. (Currently Amended) A vehicle master clutch engagement method for use with a vehicle that includes a fuel controlled engine, a master clutch and a transmission, the method comprising the steps of:

determining a desired fueling rate of the engine; and

setting an increasingly aggressive engagement rate of the clutch ~~based on~~ when the desired fueling rate of the engine is increasing.

20. (Currently Amended) ~~The method of claim 1~~ A vehicle master clutch engagement method, comprising the steps of:

determining a throttle operating parameter value; and

setting an operating mode of the clutch based on the throttle operating parameter value, wherein the operating mode further comprises engaging the clutch at a first rate when the throttle operating parameter value is less than the first threshold value and at a more aggressive rate than the first rate when the throttle operating parameter value is greater than the first threshold value.

21. (Previously Presented) The method of claim 20 further comprising the step of setting an operating mode to engage the clutch at a third rate when the throttle operating parameter value is greater than the second threshold value.

22. (Previously Presented) The method of claim 20 wherein the step of determining a throttle operating parameter value comprises sensing at least one throttle operating parameter with a sensor and providing a signal corresponding to a throttle operating parameter value to a controller.

23. (Currently Amended) ~~The method of claim 1~~ 2 wherein the throttle operating parameter value comprises the throttle position.

24. (Previously Presented) A control system for engaging a vehicle master clutch, said system comprising a controller; and at least one sensor for sensing at least one throttle operating parameter and providing an output signal to said controller indicative thereof, wherein:

the controller determines a throttle operating parameter value based on the received output signal, compares the throttle operating parameter value to a first threshold value, and sets an operating mode of the vehicle master clutch based on the comparison between the throttle operating parameter value and the first threshold value; and

the operating mode comprises engaging the clutch at a first rate when the throttle operating parameter value is less than a first threshold value and engaging the clutch at a second rate more aggressive than the first rate when the throttle operating parameter value is greater than the first threshold value.

25. (Previously Presented) The method of claim 24 wherein the operating mode further comprises engaging the clutch at a third rate more aggressive than the second rate when the throttle operating parameter value is greater than a second threshold value.

26. (Currently Amended) ~~The control system of claim 10~~ A control system for engaging a vehicular master clutch that comprises an electronic control unit for receiving signals corresponding to a throttle operating parameter value, the electronic control unit setting an operating mode of the clutch based on the throttle operating parameter value, wherein the operating mode comprises engaging the clutch at a first rate when the throttle operating parameter value is less than a first threshold value and engaging the clutch at a second rate more aggressive than the first rate when the throttle operating parameter value is greater than the first threshold value.

27. (Currently Amended) The control system of claim ~~10~~ 12 wherein the throttle operating parameter value comprises ~~at least one of the~~ throttle position.

28. (Currently Amended) ~~The method of claim 19~~ A vehicle master clutch engagement method for use with a vehicle that includes a fuel controlled engine, a master clutch and a transmission, the method comprising the steps of:

determining a desired fueling rate of the engine; and

setting an engagement rate of the clutch based on the desired fueling rate of the engine, wherein the engagement rate of the clutch is set at a first rate when the desired fueling rate of the engine is less than a first threshold value and is set at a second rate more aggressive than the first rate when the desired fueling rate of the engine is greater than the first threshold value.

29. (Cancelled)

30. (New) The method of claim 1 wherein the dynamic throttle operating parameter value corresponds to acceleration of throttle application.

31. (New) The method of claim 5, wherein the dynamic throttle operating parameter value corresponds to throttle application rate.

32. (New) The method of claim 5, wherein the dynamic throttle operating parameter value corresponds to acceleration of throttle application.

33. (New) The system of claim 10, wherein the dynamic throttle operating parameter value corresponds to acceleration of throttle application.

34. (New) The system of claim 24, wherein the dynamic throttle operating parameter value corresponds to throttle application rate.

35. (New) The system of claim 24, wherein the dynamic throttle operating parameter value corresponds to acceleration of throttle application.